

Work Order ID 80278

80278

Page 1

February-16-12 10:25:52 AM

Item ID: D3391-025 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Aft Tube Assembly
 Start Date: 16/02/2012 Start Qty: 1.00 ***1*** Cust Item ID:
 Required Date: 01/03/2012 Req'd Qty: 1.00 ***1*** Customer:
 Reference:

Approvals: Process Plan: M.C.J Date: 12/02/16 Tooling: Date: Run Start ***NR1***
 QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3391	I								

100 0.00
100 MORI SEIKI CNC LATHE LARGE
 Mori Seiki Memo 0.00
 Mori Seiki CNC Lathe Large Turn as per Folio FA599 Rev: 44 & Dwg D3391 Rev: 1

scribe batch # on fwd end at 90 degree

110 0.00
110 QC2- Inspect parts off machine FAI/FAIB
 QC Memo 0.00
 Quality Control

111 0.00
111 QC8- Inspect parts - second check
 QC Memo 0.00
 Quality Control ***INSPECT INSIDE BORE***

B.a/SC 12/03/04

B.a/SC 12/03/04

OK 12/03/05

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 2

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* HAAS I HAAS CNC vertical machine #1	HAAS CNC VERTICAL MACHINING #1 Memo 1-Machine as per Folio FA 599 Rev: <u>6A</u> & Dwg D3391 Rev: <u>I</u> 2-Deburr	0.00 0.00		<i>OK 12/03/05</i>		<u>1</u>	<u>0</u>		
130 *130* QC Quality Control	QC2- Inspect parts off machine FAI/FAIB Memo	0.00 0.00		<i>OK 12/03/05</i>		<u>1</u>	<u>0</u>		
140 *140* QC Quality Control	QC8- Inspect parts - second check Memo ***INSPECT INSIDE BORE***	0.00 0.00		<i>BA 12/03/07</i>		<u>1</u>	<u>0</u>		

W/O:		WORK ORDER CHANGES					
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Page 4

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Accept

N900040100Setup Start ***NS1***

Revision ID:

Item Name: Aft Tube Assembly

Stop ***NS2***

Start Date: 16/02/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 01/03/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

180

0.00

180

Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Open Aft cap pilot hole to .208" as per Dwg D3391

2-Drill float bag holes using DT8809 as per Dwg D3391(Holes marked "A" Only.

3-Drill wearplate holes as per Dwg D3391 using DT8878(Mid Tube) & DT8217
Wearplate Jig.

*****Do Not Open To Finished Size*****

4-Drill Wearshoe holes as per DWG D3391 using DT8939 locating from 2
previously drilled aft wearplate holes.

5-Open wearplate holes to 0.250" and c'bore as per dwg D3391

6-Open up all wearshoe , wearplate to 0.297"and float bag holes to 0.328" as per
Dwg D3391.

7-Deburr

De 12/03/08

De 12/03/012

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Page 5

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	QC5- Inspect part completeness to step on W/O	0.00							
190									
QC	Memo	0.00							
Quality Control									
200	Chemical Conversion Coat per QSI005 4.1	0.00							
200									
HandFinish	Memo	0.00							
Hand Finishing									
210	QC3- Inspect Part Finish	0.00							
210									
QC	Memo	0.00							
Quality Control									


8.12.12

12-12-12
10F

SAD 12-03-12

PTO-7

Dart Aerospace Ltd

W/O: 80278		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
12-03-12	210	change Qc3 to Qc7		12-03-12	①		S 12/03/13

Part No: D3391-025 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Page 6

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Approvals: Process Plan: Date: Tooling: Date: Run Start *NR1*
QC: Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

220		0.00							
-----	--	------	--	--	--	--	--	--	--

220

Skidtubes

Skidtubes

Memo

0.00

Instal spacers as per dwg D3391
A/R Magnabond 6398 Batch: 20666
exp. date: 13/01/30
cure time 12hrs as per QSI0015

DC 12/03/12

230

QC5- Inspect part completeness to step on W/O

0.00

230

QC

Memo

0.00

Quality Control

S 12/03/13

235

Pressure Wash per QSI005 4.3

0.00

235

HandFinish

Memo

0.00

Hand Finishing

AND REALODINE AS PER PAR09-043

1X of m-f 12/03/13

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Page 7

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
240	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
240									
Powdercoat	Memo	0.00							
Powder Coating	START TIME: <u>7h25</u> OVEN TEMPERATURE: <u>320°F</u> FINISH TIME: <u>7h55</u>								
250	QC3- Inspect Part Finish	0.00							
250									
QC	Memo	0.00							
Quality Control									
260	HandFinishing	0.00							
260									
HandFinish	Memo	0.00							
Hand Finishing	✓ 1-Install inserts as per Dwg D3391 2-Install Aft Cap as per Dwg D3391 ✓ A/R Sikaflex-241/-291 <u>11/11/99</u> Sikaflex expiry date: <u>12/08</u> ✓ 3- INSTALL WEARPLATES AS PER DWG								

W/O:		WORK ORDER CHANGES					
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Page 8

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 QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
270 *270* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00		5/26/15					
280 *280* Packaging Packaging	Identify as per dwg & Stock Location: <u>w/o</u> Memo	0.00 0.00		D412-742-043/ 1381088					1 0 44 11/03/11
290 *290* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00							12/3/15 48

12/03-15

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries

Picklist Print

February-16-12 10:25:56 AM

Page 1

Work Order ID: 80278

80278

Parent Item: D3391-025

D3391-025

Parent Item Name: Aft Tube Assembly

Start Date: 16/02/2012

Required Date: 01/03/2012

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev B 06-02-07 ECN773 dwg rev. D EC
 IPP Rev:C 06-03-28 Update Manuf. Instructions JLM
 IPP rev D 07.03.20 revF dwg EC
 IPP rev E 07.11.07 rev G dwg ecn 1053p EC verified by: DD
 IPP Rev:F 07-11-13 ECN 1056 DD verified by: EC
 IPP Rev:G 08-09-10 revH as per dwg DD verified by:EC IPP Rev:H
 11.11.14 AS PER REV.I DD verified by:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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D4095-047		Manufactured	No			260	Each	16.0000	1	1			
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D4095-047

Wearpad Assembly

**

HL 12/03/14

Location	Loc Qty	Loc Code
FP001	4	
77435	4	
FP002	12	
78325	12	

D4095-049		Manufactured	No			260	Each	11.0000	1	1			
-----------	--	--------------	----	--	--	-----	------	---------	---	---	--	--	--

D4095-049

Wearpad Assembly

**

B80704 (x1) HL 12/03/14

Location	Loc Qty	Loc Code
FP002	11	
76538	4	
77436	7	

D6014-090		Manufactured	No			100	Each	0.0000	1	1			
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D6014-090

ALUMINUM EXTRUSION

**

B77332 x1 BG 12/03/14

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Picklist Print

February-16-12 10:25:56 AM

Page 2

Work Order ID: 80278

Parent Item: D3391-025

Parent Item Name: Aft Tube Assembly

80278

D3391-025

Start Date: 16/02/2012

Required Date: 01/03/2012

Start Qty: 1.00

Required Qty: 1.00

D3670-4-200

Manufactured No

230 Each

99.0000 4 4

D3670-4-200

SPACER

**

OK 12/03/12

Location

886360

Loc Qty

Loc Code

4

LG001

99

72851

7

77500

32

78606

60

D2646

Manufactured No

270 Each

107.0000 1 1

D2646

Aft Cap

**

1379500 (x1) HL 12/03/14

Location

Loc Qty

Loc Code

FP002

107

62678

5

68280

5

70945

1

71070

2

73294

1

73825

43

78018

50

D3672-1

Manufactured No

270 Each

924.0000 2 2

D3672-1

Phenolic Washer

**

HL 12/03/14

Location

Loc Qty

Loc Code

FP001

288

66821

288

ST060

636

72229

136

76277

500

✓2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Picklist Print

February-16-12 10:25:57 AM

Page 3

Work Order ID: 80278

Parent Item: D3391-025

Parent Item Name: Aft Tube Assembly

80278

D3391-025

Start Date: 16/02/2012

Required Date: 01/03/2012

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-130

Purchased

No

260

Each

2,115.000

14

14

AI S4-1032-130

Insert

**

yl n103/14

Location

Loc Qty

Loc Code

ST280

1116

119084

116

120671

1000

yl

ST281

999

119632

19

120410

980

ALS4-1032-225

Purchased

No

270

Each

1,382.000

8

8

AI S4-1032-225

Insert

**

yl n103/14

Location

Loc Qty

Loc Code

ST281

1031

108696

146

110768

62

118386

55

118966

68

120671

700

ST282

351

120410

200

120451

151

x8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Page 4

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D3391-025

Parent Item Name: Aft Tube Assembly

Start Date: 16/02/2012

Required Date: 01/03/2012

Start Qty: 1.00

Required Qty: 1.00

AN3C4A Purchased No 270 Each 3,439.000 6 6
AN3C4A ** M120430(x6) JH n103/11
 BOLT

Location	Loc Qty	Loc Code
ST350	3439	
117313	2	
117688	5	
117872	10	
118112	16	
118451	2	
119749	10	
120187	2000	
120423	394	
120521	1000	

AN3C5A Purchased No 270 Each 1,038.000 4 4
AN3C5A ** JH n103/14
 Bolt

Location	Loc Qty	Loc Code
FP001	7	
115835	7	
ST350	1031	
116419	28	
117343	13	
117764	7	
117872	2	
119127	24	
119749	27	
120423	930	

AN960C10L NAS1149C0332 Purchased No 270 Each 0.0000 10 10
R
***AN960C10I *** ** M120648 (x10) JH n103/11
 washer

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: 80278
Description: Float Skidtube (412)		Part Number: D3391-3
Inspection Dwg: D3391	Rev: H F	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Lathe Section						
14.000	+/-0.010	14.002	✓		Caliper	B606
3.500	+/-0.010	3.495	✓			"
88.93	+/-0.030	88.93	✓		Tape	B609
Ø3.200	+/-0.010	3.206	✓			B606
88.93	+/-0.030	88.93	✓			B609
Ø3.750	+/-0.010	3.746	✓			B606
30° x 160° chamfer	+/-0.010	-	-			"

Measured by: JAB	Date: 12/03/04
Audited by: [Signature]	Date: 12/03/05

HAAS Section						
1.526	+0.000/-0.030	1.510	✓		Vern ML-06	
7.500	+/-0.010	7.496	✓		M-tape ML-09	
27.750	+/-0.010	27.750	✓		"	
31.750	+/-0.010	31.750	✓		"	
35.250	+/-0.010	35.250	✓		"	
3.300	+/-0.010	3.295	✓		Vern ML-06	
0.200	+/-0.010	.198	✓		"	
3.520	+/-0.010	3.524	✓		"	
0.687	+0.010/-0.000	.687	✓		"	
R0.062	+/-0.010	R.062	✓		R-L	
Ø0.484	+0.005/-0.001	Ø.485	✓		Vern ML-06	

Measured by: [Signature]	Date: 12/03/05
Audited by: DA	Date: 12/03/07

Rev	Date	Change	Revised by	Approved
A	06.04.24	New Issue P/O D3391-015/-025	KJ/JLM	
B	06.06.19	Dwg revision update	KJ/JLM	
C	07.04.20	Ø0.208 dimension removed	KJ/JLM	
D	07.09.06	0.400 dimension removed	KJ/JLM	
E	07.11.23	Dwg Rev. updated	KJ/EC/DD	
F	09.04.27	Dimensions updated per Rev H and NCR09-028	KJ/JLM	
G	09.11.16	Dimension 0.200 removed	KJ	
H	11.06.21	Dimension 44.995 removed	KJ	

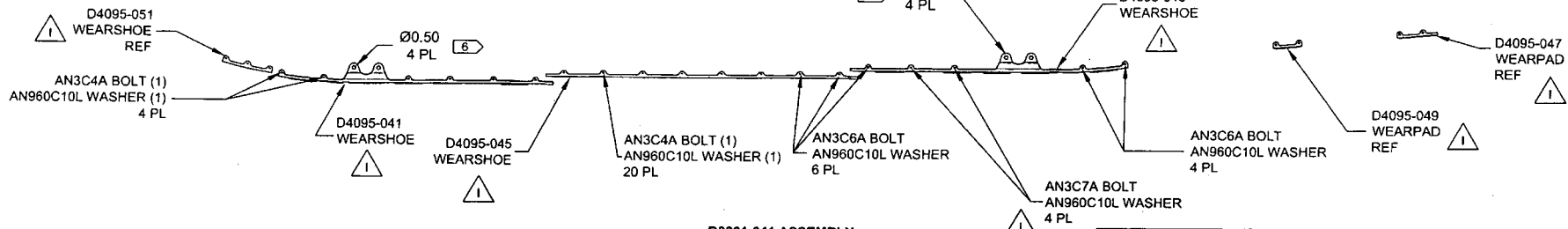
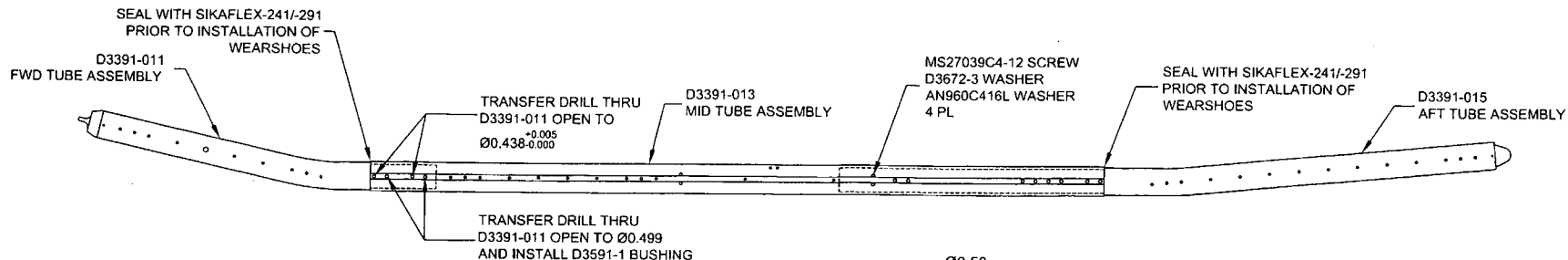
W/O:		WORK ORDER CHANGES					
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D3391-041 ASSEMBLY

D3391-041 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
X	D3391-041	Float SKIDTUBE ASSEMBLY
1	D3391-011	FWD TUBE ASSEMBLY
1	D3391-013	MID TUBE ASSEMBLY
1	D3391-015	AFT TUBE ASSEMBLY
2	D3591-1	BUSHING
4	D3672-3	WASHER
1	D4095-041	WEARSHOE
1	D4095-043	WEARSHOE
1	D4095-045	WEARSHOE
1	D4095-047	WEARSHOE
1	D4095-049	WEARPAD
1	D4095-051	WEARSHOE
24	AN3C4A	BOLT
10	AN3C6A	BOLT
4	AN3C7A	BOLT
38	AN960C10L	WASHER
4	MS27039C4-12	SCREW
4	AN960C416L	WASHER

GENERAL NOTES

- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON"
AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL $\varnothing 0.297$ SIZE HOLES
FOR WEARSHOE INSERTS. C'BORE AS NOTED AND INSTALL INSERTS EXCEPT
WHERE INDICATED.
- 6) FIT D4095-041 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH
APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND
TRANSFER DRILL $\varnothing 0.50$ HOLES FROM SADDLE TO D4095-041
- 7) FIT D4095-043 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH
THE APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND
TRANSFER DRILL $\varnothing 0.50$ HOLES FROM SADDLE TO D4095-043

RELEASED
2011-11-04
ECN# 11-662

I	REMOVE GASKETS AND REPLACE ALL WEARSHOES; PARTS LIST UPDATE, ZN A8-1, ZN A8-2, ZN A6-4, ZN B6-8; LPS-3 COATING REMOVED FROM NOTE 2, ZN A3-1, ZN A3-2, REMOVED INSERT AELS-1032-130, ZN B6-4, B2-4, C7-8, C3-8; REMOVED HOLES, ZN D6-4 ZN D2-4, ZN D7-8, ZN D3-8	XDF	11.10.13
H	DRAWING UPDATED TO CURRENT STANDARDS. SHT 1 PL ADDED D3591-1 BUSHING. ZN C6 $\varnothing 0.438$ DIM WAS 4 PL. ADDED $\varnothing 0.499$ DIM AND D3591-1 BUSHING. SHT 2 PL ADDED D3591-1 BUSHING. ZN C6 $\varnothing 0.438$ DIM WAS 4 PL. ADDED $\varnothing 0.499$ DIM AND D3591-1 BUSHING. (FOR FURTHER INFO SEE DSI 9364 & NCR 08-074)	AJS	08.08.20
G	REPLACE NAS INSERTS W/ AELS INSERTS SWITCH TO D3670-XXXX SPACERS FOR INSTALLING FLOAT BAGS, DWG REORGANIZED FOR CLARITY	DC	07.07.31
F	ADD SS WEARSHOE, GASKET REMOVE FWD SADDLE HOLE -011/-021	PH	07.01.18
E	CHANGE TOLERANCE, EASE MANUFACTURE	PH	06.04.25
D	UPDATE TOLERANCE, CHANGE HOLE SIZE	PH	06.01.23
C	LENGTHEN AFT EXTENSION	PH	05.09.27
B	DRAWING UPDATES	PH	05.06.10
A	NEW ISSUE	PH	05.02.07
REV.	DESCRIPTION	BY	DATE
DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	XDF	KENT, WA	
CHECKED		DRAWING NO.	REV. I
MFG. APPR.		D3391	SHEET 1 OF 8
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DE APPR.		412 FLOAT SKIDTUBE	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8 7 6 5 4 3 2

SEAL WITH SIKAFLEX-241/-291
PRIOR TO INSTALLATION OF
WEARSHOES

D3391-021
FWD TUBE ASSEMBLY

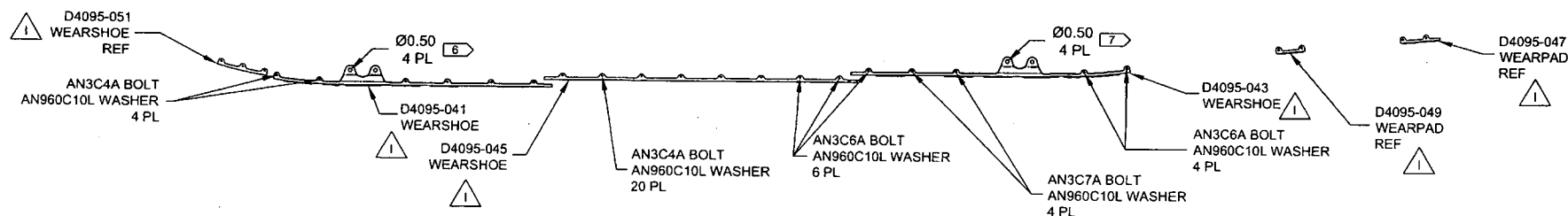
TRANSFER DRILL THRU
D3391-021 OPEN TO
 $\begin{matrix} +0.005 \\ \text{Ø}0.438-0.000 \end{matrix}$

D3391-023
MID TUBE ASSEMBLY

TRANSFER DRILL THRU
D3391-021 OPEN TO Ø0.499
AND INSTALL D3591-1 BUSHING

SEAL WITH SIKAFLEX-241/-291
PRIOR TO INSTALLATION OF
WEARSHOES

D3391-025
AFT TUBE ASSEMBLY



D3391-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
X	D3391-043	FLOAT SKIDTUBE ASSEMBLY
1	D3391-021	FWD TUBE ASSEMBLY
1	D3391-023	MID TUBE ASSEMBLY
1	D3391-025	AFT TUBE ASSEMBLY
2	D3591-1	BUSHING
1	D4095-041	WEARSHOE
1	D4095-043	WEARSHOE
1	D4095-045	WEARSHOE
1	D4095-047	WEARPAD
1	D4095-049	WEARPAD
1	D4095-051	WEARSHOE
24	AN3C4A	BOLT
10	AN3C6A	BOLT
4	AN3C7A	BOLT
38	AN960C10L	WASHER

GENERAL NOTES

- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCRYON"
AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES
FOR WEARSHOE INSERTS. C'BORE AS NOTED AND INSTALL INSERTS EXCEPT
WHERE INDICATED.
- 6) FIT D4095-041 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH
APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND
TRANSFER DRILL Ø0.50 HOLES FROM SADDLE TO D4095-041
- 7) FIT D4095-043 TO SKIDTUBE WITH D2571 AND D2572 SADDLES INSTALLED WITH
THE APPROPRIATE HARDWARE AND SPACERS IN FORWARD AND AFT HOLES AND
TRANSFER DRILL Ø0.50 HOLES FROM SADDLE TO D4095-043

RELEASE
2011-11-04

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DRAWN	XDF	KENT, WA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV.
MFG. APPR.	<i>[Signature]</i>	D3391	SHEET 2 OF
APPROVED	<i>[Signature]</i>	TITLE	SCALE
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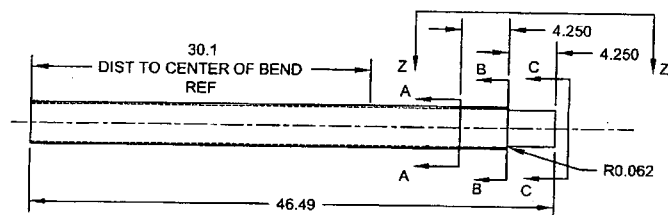
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

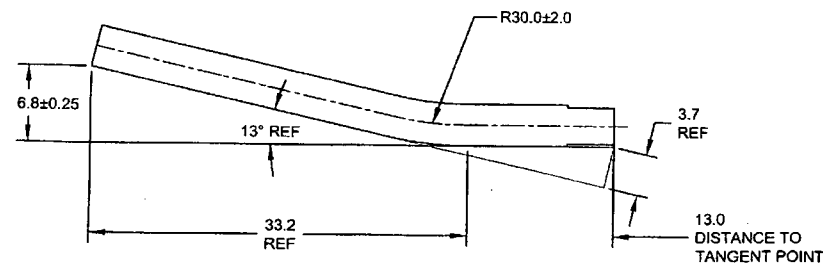
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

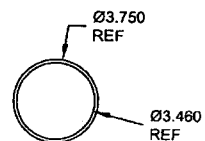
80278



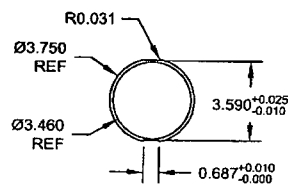
D3391-1 CUTTING DETAIL
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



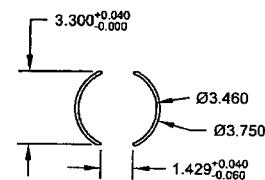
D3391-011/-021 BENDING DETAIL
(MAKE FROM D3391-1)



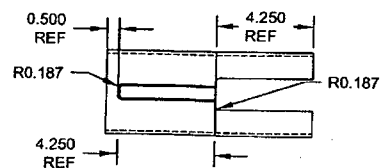
SECTION A-A
SCALE 2X



SECTION B-B
SCALE 2X



SECTION C-C
SCALE 2X



VIEW Z-Z
SCALE 2X

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2011-11-04

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

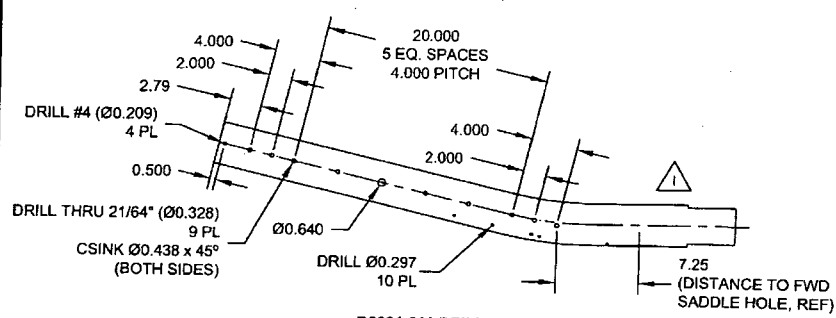
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

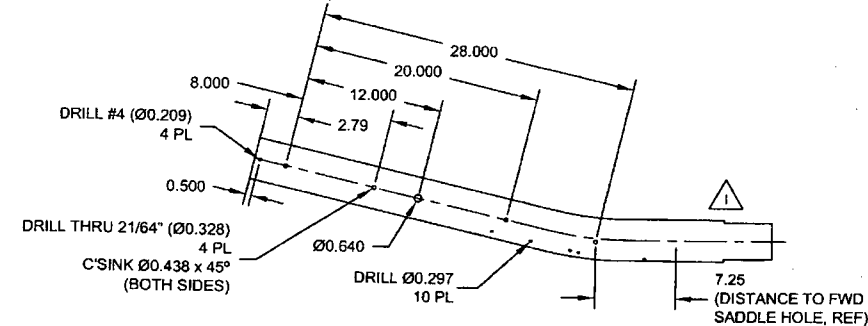
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

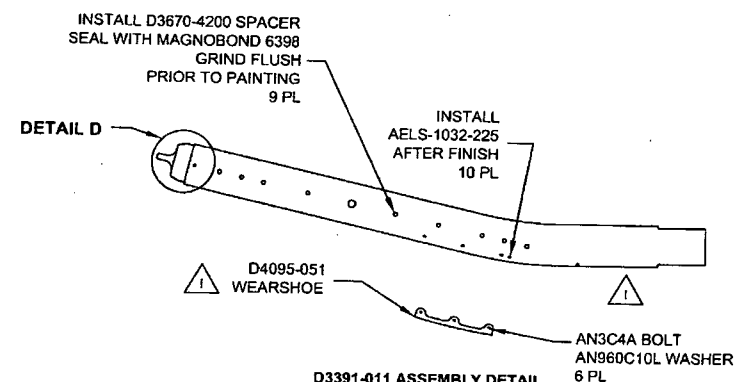
20278



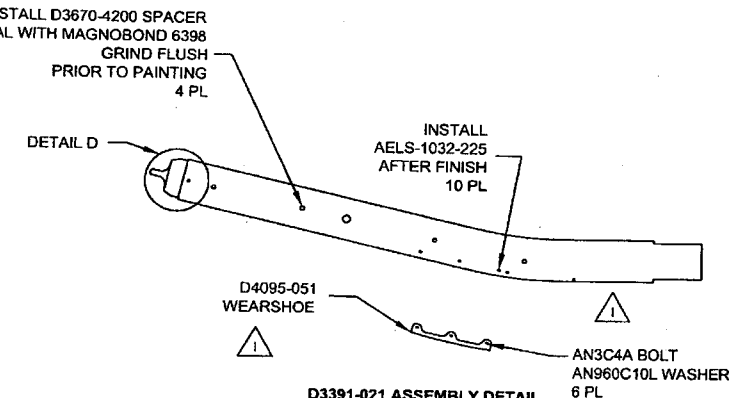
D3391-011 DRILLING DETAIL



D3391-021 DRILLING DETAIL



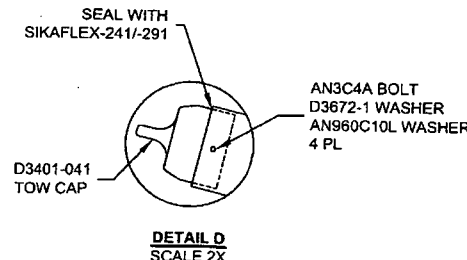
D3391-011 ASSEMBLY DETAIL



D3391-021 ASSEMBLY DETAIL

D3391-011/-021 FWD TUBE ASSEMBLY PARTS LIST

QTY - 011	QTY - 021	PART NUMBER	DESCRIPTION
X	X	D3391-011	FWD TUBE ASSEMBLY
		D3391-021	FWD TUBE ASSEMBLY
1	1	D3401-041	TOW CAP
9	4	D3670-4200	SPACER
4	4	D3672-1	WASHER
1	1	D4095-051	WEARSHOE
1	1	D6013-047	FWD TUBE
10	10	AN3C4A	BOLT
10	10	AN960C10L	WASHER
10	10	AELS-1032-225	INSERT



DETAIL D SCALE 2X

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2011-11-04

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

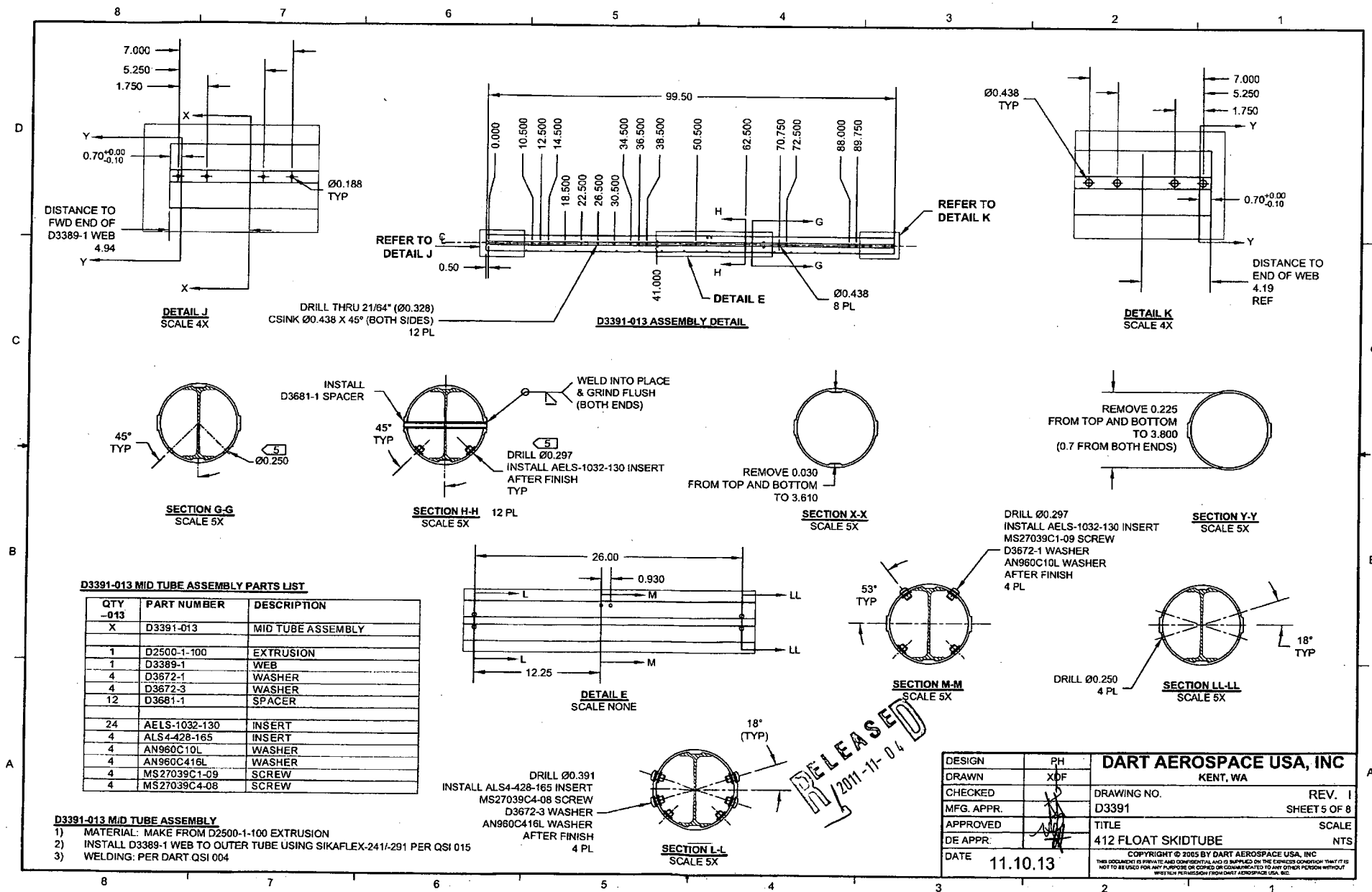
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

80270



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

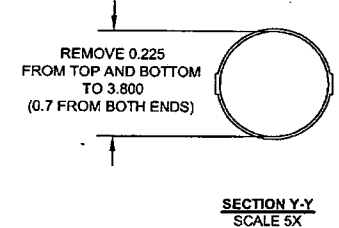
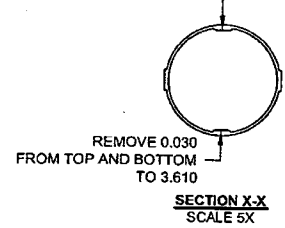
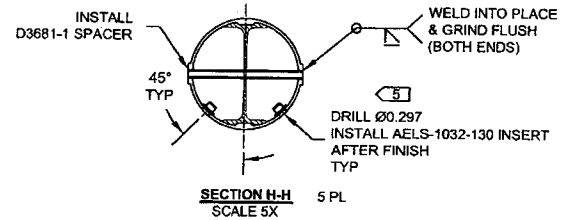
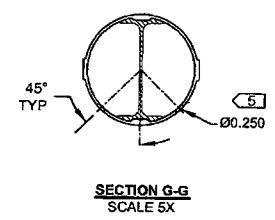
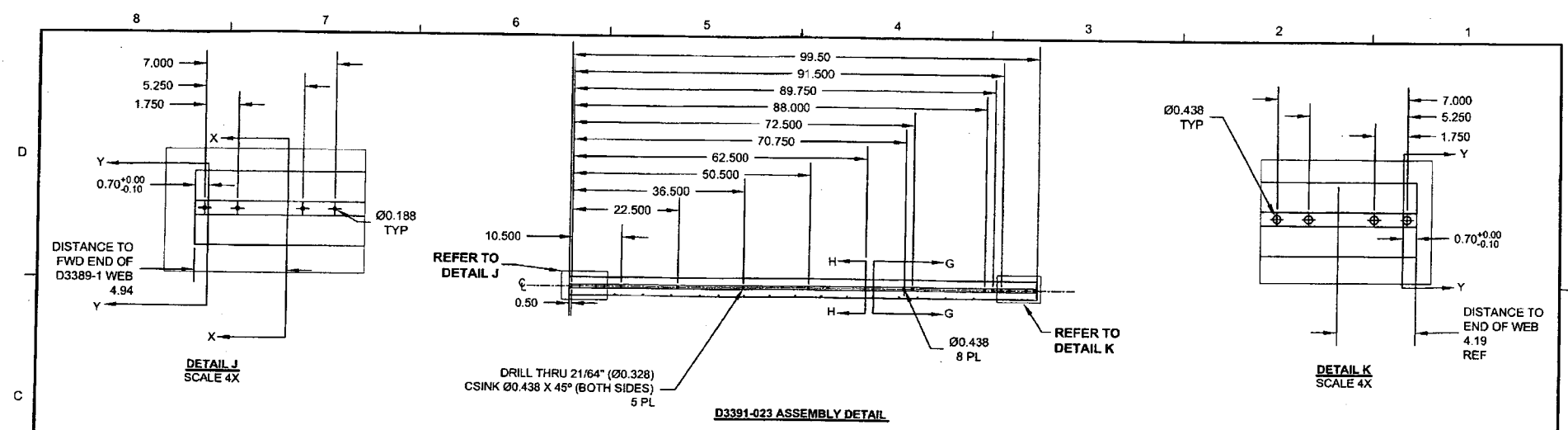
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

80270



D3391-023 MID TUBE ASSEMBLY PARTS LIST

QTY -	PART NUMBER	DESCRIPTION
023		
X	D3391-023	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
5	D3681-1	SPACER
20	AELS-1032-130	INSERT

- D3391-023 MID TUBE ASSEMBLY**
- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
 - 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/-291 PER QSI 015
 - 3) WELDING: PER DART QSI 004

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2011-11-04

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

[illegible]

D3391-3 AFT DRILLING AND CUTTING DETAIL
(MAKE FROM D6014-090 SKIDTUBE MATERIAL)

12.5 INCH DIAMETER SKID TUBE
(MAKE FROM D6014-090 SKIDTUBE MATERIAL)

1.526^{+0.000}_{-0.030}

3.300

Ø3.500

Ø3.750 REF

0.200

3.300

Ø3.000 REF

Ø3.750 REF

3.520

Ø3.000 REF

Ø3.750 REF

R0.062

0.687^{+0.010}_{-0.000}

Ø3.000 REF

Ø3.750 REF



Ø3.000 REF

Ø3.200 REF

SECTION R-R
SCALE 6X

VIEW W-W
SCALE 4X

RELEASE
2011-11-04

DESIGN	PH	DART AEROSPACE USA, INC	
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CHECKED		DRAWING NO.	REV.
MFG. APPR.		D3391	SHEET 7 OF
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DE APPR.		412 FLOAT SKIDTUBE	NT
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

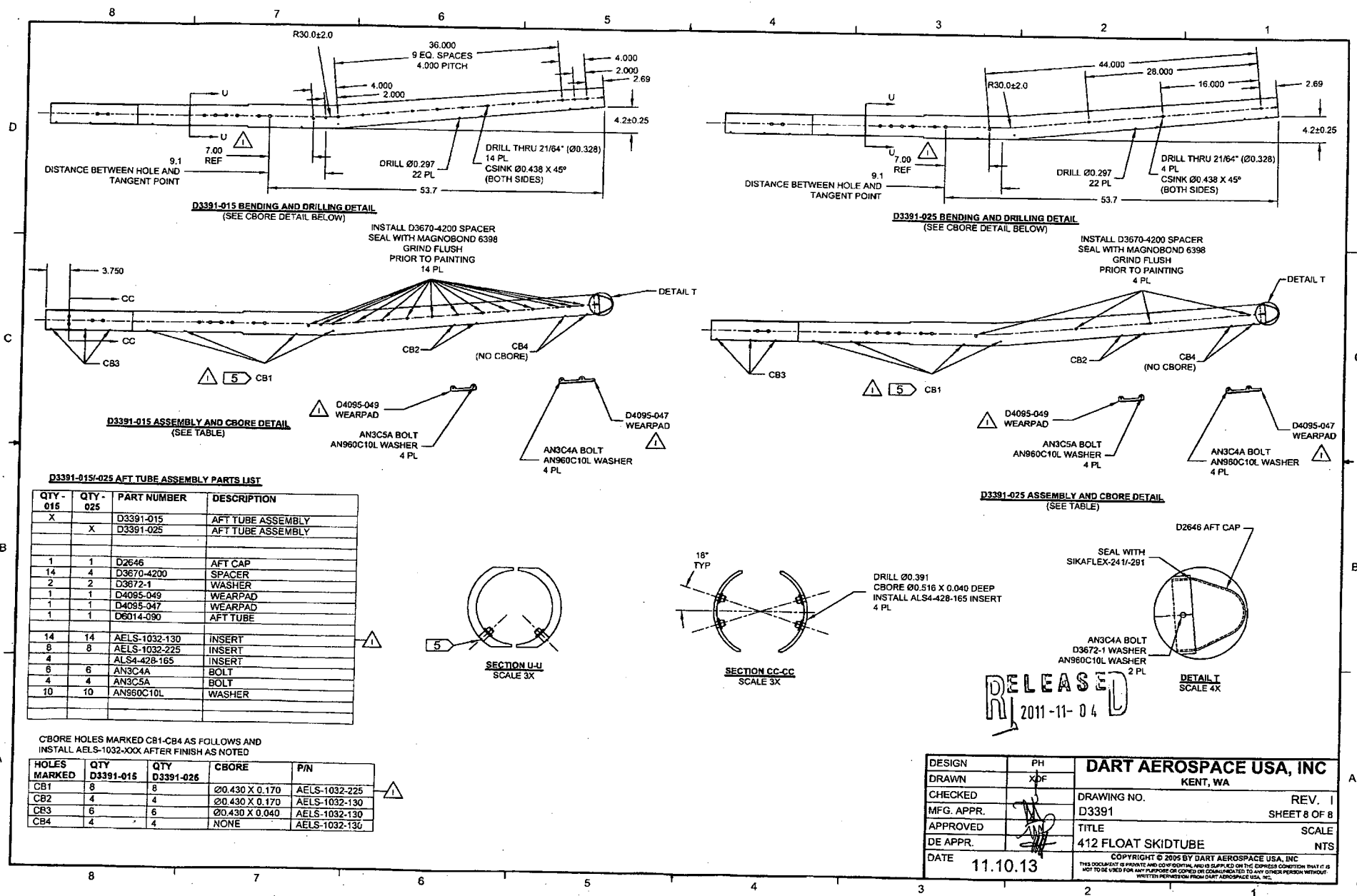
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

80278



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries